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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,121	07/28/2003	Roger Pruitt	S604-J	5906

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EXAMINER	
JIANG, CHEN WEN	

ART UNIT	PAPER NUMBER
3744	

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/629,121	PRUITT, ROGER
	Examiner	Art Unit
	Chen-Wen Jiang	3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-10,12-22,24,25,27-38,40-43 and 45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4,6-10,12-14,30-33,42,43 and 45* is/are allowed.

6)☒ Claim(s) *1-3,15-22,24,25,27-29,34-38,40 and 41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 41 recites the limitation "said ambient air" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

3. The following rejections are based on the best understanding of the claimed limitations.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughan (U.S. Patent Number 4,090,370) in view of Shum (U.S. Patent Number 4,658,597).

Vaughan discloses an environmental control system for regulating humidity and temperature. Applicant notes that the system of Fig.9 is a serial process. However, Fig.9 is not a part of the office action. Referring to Figs.1,7 and 8, cooling is accomplishing by actuating the blower 20 in the dry air flow path so that air from the confined volume flows through the first group of tubes 14, through the plenum chamber 16 and through the second group of tubes 18. The water pump 52 is actuated to spray water in the evaporation path and on the padding 32 surrounding the tubes 14,18, and the axial-centrifugal blower 26 is turned on to direct air through the evaporation flow path. If humidification is also desired, the first controllable vent 28 is

opened, while the second controllable vent 30 is closed so that humidified air from the evaporation flow path is expelled to the confined volumetric region. As air passed across the moistened tubes 14,18, the water in the padding 32, as well as some of the water spray, evaporates, chilling the padding 32 surrounding the tubes 14,18. Heat exchanged between the interior and exterior of the tubes chills the dry flow path air within the tubes which is expelled from the outlet chamber to the confined volumetric region. The inlet duct 34 has a manually movable hinged plate 38 defining an auxiliary inlet (Figs.7 and 8) in which the plate 38 is extended in an open position. The auxiliary inlet, when open, allows recirculation of room air through the evaporation path (from plurality sources to wet side). The evaporation path outlet duct 36 is coupled by a transfer duct 37 to the dry flow path inlet 12 to selectively admit humidified evaporation flow path air to the dry air flow path. A control unit 62 includes the high and low temperature and humidity sensors. A temperature and humidity responsive control unit is integrally coupled to selectively actuate the controllable vents, the blowers, the pump and the heating element. In regard to claim 34, Applicant should note the selection of available power source is a design choice within the skill of prior art (e.g., Shum). In regard to claims 36-38, the selection of temperature, humidity and timer, Applicant should note these are the user's choice and are not patentable. Vaughan discloses an apparatus satisfying the structural requirements of the claimed. The disclosed apparatus also enjoys the same utility as that claimed. The level of the cooling and humidity do not impose any structural limitations upon the claimed apparatus which differentiates it from a prior art apparatus satisfying the *structural* limitations of that claimed. See *In re Pearson*, 494 F2d. 1399, 181 USPQ 641 (CCPA 1974).

6. Claims 1-3,15-19,20,28,29,40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughan (U.S. Patent Number 4,090,370) in view of Schlom et al. (U.S. Patent Number 4,137,058).

Vaughan discloses an environmental control system for regulating humidity and temperature. Applicant notes that the system of Fig.9 is a serial process. However, Fig.9 is not a part of the office action. Referring to Figs.1,7 and 8, cooling is accomplishing by actuating the blower 20 in the dry air flow path so that air from the confined volume flows through the first group of tubes 14, through the plenum chamber 16 and through the second group of tubes 18. The water pump 52 is actuated to spray water in the evaporation path and on the padding 32 surrounding the tubes 14,18, and the axial-centrifugal blower 26 is turned on to direct air through the evaporation flow path. If humidification is also desired, the first controllable vent 28 is opened, while the second controllable vent 30 is closed so that humidified air from the evaporation flow path is expelled to the confined volumetric region. As air passed across the moistened tubes 14,18, the water in the padding 32, as well as some of the water spray, evaporates, chilling the padding 32 surrounding the tubes 14,18. Heat exchanged between the interior and exterior of the tubes chills the dry flow path air within the tubes which is expelled from the outlet chamber to the confined volumetric region. The inlet duct 34 has a manually movable hinged plate 38 defining an auxiliary inlet (Figs.7 and 8) in which the plate 38 is extended in an open position. The auxiliary inlet, when open, allows recirculation of room air through the evaporation path (from plurality sources to wet side). Turbulent flow is inherent in the system since these two stream combined in perpendicular way. The evaporation path outlet duct 36 is coupled by a transfer duct 37 to the dry flow path inlet 12 to selectively admit

humidified evaporation flow path air to the dry air flow path. A control unit 62 includes the high and low temperature and humidity sensors. A temperature and humidity responsive control unit is integrally coupled to selectively actuate the controllable vents, the blowers, the pump and the heating element. However, Vaughan does not disclose supply air combined in a confined space. Schlom et al. disclose two streams can be combined in a confined space 127 (Fig.4) in the same field of endeavor for the purpose of combined flows. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Vaughan with a combined space in view of Schlom et al. so as to combine flows. In regard to the selection of temperature, humidity and timer, Applicant should note these are the user's choice and are not patentable. Vaughan discloses an apparatus satisfying the structural requirements of the claimed. The disclosed apparatus also enjoys the same utility as that claimed. The level of the cooling and humidity do not impose any structural limitations upon the claimed apparatus which differentiates it from a prior art apparatus satisfying the *structural* limitations of that claimed. See *In re Pearson*, 494 F2d. 1399, 181 USPQ 641 (CCPA 1974).

7. Claims 21,22,24,25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughan (U.S. Patent Number 4,090,370) in view of Schlom et al. (U.S. Patent Number 4,137,058) and further in view of Curtis (U.S. Patent Number 4,674,295).

Vaughan discloses an environmental control system for regulating humidity and temperature. Applicant notes that the system of Fig.9 is a serial process. However, Fig.9 is not a part of the office action. Referring to Figs.1,7 and 8, cooling is accomplishing by actuating the blower 20 in the dry air flow path so that air from the confined volume flows through the first group of tubes 14, through the plenum chamber 16 and through the second group of tubes 18. All

the inlets can include room air. The water pump 52 is actuated to spray water in the evaporation path and on the padding 32 surrounding the tubes 14,18, and the axial-centrifugal blower 26 is turned on to direct air through the evaporation flow path. If humidification is also desired, the first controllable vent 28 is opened, while the second controllable vent 30 is closed so that humidified air from the evaporation flow path is expelled to the confined volumetric region. As air passed across the moistened tubes 14,18, the water in the padding 32, as well as some of the water spray, evaporates, chilling the padding 32 surrounding the tubes 14,18. Heat exchanged between the interior and exterior of the tubes chills the dry flow path air within the tubes which is expelled from the outlet chamber to the confined volumetric region. The inlet duct 34 has a manually movable hinged plate 38 defining an auxiliary inlet (Figs.7 and 8) in which the plate 38 is extended in an open position. The auxiliary inlet, when open, allows recirculation of room air through the evaporation path (from plurality sources to wet side). The evaporation path outlet duct 36 is coupled by a transfer duct 37 to the dry flow path inlet 12 to selectively admit humidified evaporation flow path air to the dry air flow path. A control unit 62 includes the high and low temperature and humidity sensors. A temperature and humidity responsive control unit is integrally coupled to selectively actuate the controllable vents, the blowers, the pump and the heating element. However, Vaughan does not disclose supply wet and dry air discharge into conduit and combined in a location remote from the dry side and also does not disclose plurality wet side blowers. Schlom et al. disclose two streams can be combined in a remote location 127 (Fig.4) in the same field of endeavor for the purpose of combined flows. Curtis discloses plurality blowers for wet side inlets. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Vaughan

with a blowers and conduit in view of Schlom et al. and Curtis so as to deliver flows. Vaughan discloses an apparatus satisfying the structural requirements of the claimed. The disclosed apparatus also enjoys the same utility as that claimed. The utility is capable to place an object in heat exchanging relationship with the water source.

Allowable Subject Matter

8. Claims 4,6-10,12-14,30-33,42,43 and 45 are allowed.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (703) 308-0275. The examiner can normally be reached on Tuesday-Friday from 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel can be reached on (703) 308-2597. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen-Wen Jiang
Primary Examiner